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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/532,894	03/22/2000	Masataka Mitama	11P083162	8017
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MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817				
			EXAMINER NGUYEN, THUAN T	
			ART UNIT 2685	PAPER NUMBER 9

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER NUMBER
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DATE MAILED:

9

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Commissioner of Patents and Trademarks

See attachment

Office Action Summary

Application No.

09/532,894

Applicant(s)

MITAMA, MASATAKA

Examiner

THUAN T. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

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DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 6-9, 11-12, 14, 16, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (U.S. Patent No. 5,465,404/ or "Thompson" hereinafter) in view of Wing (U.S. Patent No. 5,570,373).

Regarding claims 1, 16, 18 and 20, Thompson discloses a software portable telephone set (Fig. 5 and col. 9/lines 13-30 for a detachable module 100 containing software applications) comprising a detachable transmitting function part (Fig. 10 with a transceiver 104 within a detachable module 100 for providing transmitting function) and transmitting and receiving circuits

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capable of being reconfigured afresh with software program updating, wherein the transmission circuit is reconfigured afresh in relation to the mounting and demounting of said transmitting function part, i.e., the detachable module 100 comprises transmitting and receiving circuits (as illustrated in Fig. 10 with a transmitter and a receiver; and in Fig. 8 with a wireless radio communication 90 with antenna 92) can be removed or inserted into the body of the cellular phone 50 and by the mounting and demounting of a transmitting function part, software can be updated accordingly to a transmission system, for instance, to cope with different communication systems (see col. 3/line 52 to col. 4/line 23).

Thompson does not further address the step of wherein said detachable transmitting function part “conditions a transmission frequency signal received from said transmitting circuit”; however, Wing teaches a similar technique that any radio within the base station system including the mobile stations can be monitored with iteration processes for transmission/reception condition between the radios of the mobile stations and the base station, and based on that monitoring process, the transmitting circuit can be conditioning, i.e., software update or re-programming, the transmission frequency signal received from the transmitting circuit of the mobile station (see Figs. 3A & 3B, and col. 5/line 50 to col. 6/line 33 & col. 7/line 49 to col. 8/line 21, and col. 9/lines 4-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Thompson’s system with Wing’s disclosed technique in order to provide a convenient software portable telephone set that can condition a transmission frequency signal for correcting any fault, if any, as taught by Wing.

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As for claim 3, in further view of claim 1 above, Thompson further discloses “wherein the transmitting and receiving circuits comprise a software memory part for executing signal conversion processing, programs transferred from a program memory being set in the software memory part”, i.e., a resident memory 84 or 284 (same function in both Figs. 7 & 8) contains resident applications and core software programs within communication device 50 (col. 9/lines 30-48 & col. 10/lines 13-25) for executing signal conversion processing, as to handle complex digital information via a modem communication between processor 80 and external sources (col. 10/lines 26-43) as well as handling the encoding or decoding information between processor 80 and resident memory 84 via bus 64 (col. 9/lines 37-48), and programs transferred is addressed in the memory upload and download from application modules 100 and utility programs for operation the processor 80 and the digital signal processor DSP 76 (col. 10/lines 55-65).

As for claim 6, in further view of claim 1 above, Thompson discloses “wherein the transmitting and receiving circuits comprise a software memory part for executing signal conversion processing, programs transferred from a program memory being set in the software memory part and a plurality of programs for commanding signal conversion processing are stored in the program memory”, i.e., a resident memory 84 or 284 (same function in both Figs. 7 & 8) contains resident applications and core software programs within communication device 50 (col. 9/lines 30-48 & col. 10/lines 13-25) for executing signal conversion processing, as to handle complex digital information via a modem communication between processor 80 and external sources (col. 10/lines 26-43) as well as handling the encoding or decoding information between

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processor 80 and resident memory 84 via bus 64 (col. 9/lines 37-48), and programs transferred from a program memory (Fig. 8/item 184) is addressed in the memory upload and download from application modules 100 and utility programs for operation the processor 80 and the digital signal processor DSP 76 (col. 10/lines 55-65) and a plurality of programs for commanding signal conversion processing are stored in the program memory (Fig. 10, and col. 14/line 45 to col. 15/line 47 for examples of programs stored in program memory 184 for signal conversion processing to different applications).

As for claim 7, in further view of claim 1 above, Thompson discloses “wherein the transmitting and receiving circuits comprise a software memory part for executing signal conversion processing, programs transferred from a program memory being set in the software memory part and the software memory provides commands according to a program transferred from the program memory according to a system switching command”, i.e., a resident memory 84 or 284 (same function in both Figs. 7 & 8) contains resident applications and core software programs within communication device 50 (col. 9/lines 30-48 & col. 10/lines 13-25) for executing signal conversion processing, as to handle complex digital information via a modem communication between processor 80 and external sources (col. 10/lines 26-43) as well as handling the encoding or decoding information between processor 80 and resident memory 84 via bus 64 (col. 9/lines 37-48), and programs transferred from a program memory (Fig. 8/item 184) is addressed in the memory upload and download from application modules 100 and utility programs for operation the processor 80 and the digital signal processor DSP 76 (col. 10/lines 55-

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65); and Thompson inherently teaches the software memory provides commands according to a program transferred from the software source memory according to a system switching command because different networks provides different protocols are under the control or command of the system facility 22 for switching or change systems, for instance, different modules contains different software source memory according to that system for the portable set to cope with either a PBX system or a wireless cellular system (Fig. 1, col. 16/lines 23-35 and col. 17/line 63 to col. 18/line 17).

Regarding claim 8, Thompson discloses “a portable telephone set comprising: a body, a transmitting circuit within said body; and a transmission function unit for performing a specified transmission process and being detachably mounted to said body of the portable telephone set, wherein an operation of the transmission function unit is determined on the basis of a predetermined software program which is selected”, i.e., a portable telephone set (Fig. 5 and col. 9/lines 13-30 for a detachable module 100 containing software applications) comprising a detachable transmitting function part and a receive function unit (as illustrated in Fig. 10 with a transmitter and a receiver; and in Fig. 8 with a wireless radio communication 90 with antenna 92) can be removed or inserted into the body of the cellular phone 50 and by the mounting and demounting of a transmitting function part, software can be updated accordingly to a transmission system, for instance, to cope with different communication systems (see col. 3/line 52 to col. 4/line 23).

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Thompson does not further address the step of wherein said transmitting function unit “conditions a transmission frequency signal received from said transmitting circuit”; however, Wing teaches a similar technique that any radio within the base station system including the mobile stations can be monitored with iteration processes for transmission/reception condition between the radios of the mobile stations and the base station, and based on that monitoring process, the transmitting circuit can be conditioning, i.e., software update or re-programming, the transmission frequency signal received from the transmitting circuit of the mobile station (see Figs. 3A & 3B, and col. 5/line 50 to col. 6/line 33 & col. 7/line 49 to col. 8/line 21, and col. 9/lines 4-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Thompson’s system with Wing’s disclosed technique in order to provide a convenient software portable telephone set that can condition a transmission frequency signal for correcting any fault, if any, as taught by Wing.

As for claim 9, in further view of claim 8 above, Thompson further discloses “wherein the predetermined software program is selected from a plurality of software programs stored in a memory in the portable telephone set”, i.e., a resident memory in the portable set contains a plurality of predetermined application software and programs (Fig. 7/item 84 or Fig. 8/item 284, and col. 10/lines 23-65).

As for claim 11, in further view of claim 8 above, Thompson discloses “wherein said transmission function unit comprises one of a plurality of transmission function units each performing a different frequency band operation”, i.e., different frequency band operation is

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programmed in different application modules containing transmission function units, for instance, to cope with a PBX communication system or to a cellular communication system (col. 15/line 15 to col. 16/line 35 for different portions of frequency spectrum are used for different systems and protocols).

As for claim 12, in further view of claim 9 above, Thompson discloses “comprising a receive processing unit” (Fig. 10/item 104), “wherein the plurality of software programs are stored in a software source memory, one of the plurality of software programs is selected and down-loaded and an operation of the receive processing unit is defined by the down-loaded software program”, i.e., Thompson teaches that a plurality of software programs are stored in a software source memory or a program memory 184 and one of them is selected and downloaded to a resident memory 84 or 284 and then the operation of the receive processing unit is performed based on the downloaded software or the application program accordingly (col. 14/line 45 to col. 15/line 14).

As for claim 14, in further view of claim 8 above, Thompson discloses “wherein the transmission function unit comprises a software memory for storing one of a plurality of software programs each adapted to each transmission function unit, the predetermined software program being defined by loading the software program from the software memory in the mounted transmission function unit”, i.e., Thompson teaches that a plurality of software programs are stored in a software source memory or a program memory 184 and one of them is selected and downloaded to a resident memory 84 or 284 and then the operation of the receive processing unit

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is performed based on the defined downloaded software or the application program accordingly (col. 14/line 45 to col. 15/line 14).

4. Claims 2, 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (U.S. Patent No. 5,465,401) in view of Wing as in claims 1 and 8 above, and in view of Ganesan et al. (U.S. Patent No. 5,812,951/ or "Ganesan" hereinafter).

Regarding claims 2, 4 and 10, in further view of claims 1 and 8 above, Thompson does not disclose wherein the transmitting function is provided by a detachable module for transmitting "a modulated output analog signal" and comprise one of "a demodulator" or "a modulator" as claimed (only one limitation is considered to be claimed) and a baseband signal processing portion; however, the technique of modulating a digital signal in order to obtain a modulated output analog signal for transmitting that signal is known in the art. In fact, Ganesan teaches a same technique for use in Ganesan's wireless PCS 20 including software downloading, wherein in the transmitting path, a modulator 42 (Fig. 2) is included, the signal is modulated and provided to a transmit RF section 40 in the form of a modulated output analog signal for transmitting at an antenna 29 (Fig. 2 and col. 1/lines 26-36 for a wireless PCS system, col. 2/lines 54-64 for software downloading; and col. 8/lines 8-25 & col. 9/lines 15-20 for (analog) RF signals at the transmitting path via antenna 29), and a demodulator 33 of Figure 2 for the receiving process as well as a base band signal processing portion (as shown in Fig. 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify

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Thompson's technique of having a detachable module including the transmitting function with Ganesan's detailed technique of how to transmit analog signals using a modulator and a demodulator in order to provide "a modulated output analog signal" for transmitting signals in communication to the analog system, if any, and the receiving process using the demodulator for demodulating the received RF signal and obtaining base band signals as preferred.

5. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (U.S. Patent No. 5,465,401) in view of Wing as in claims 1 and 8 above, and in view of Crnkovic et al. (U.S. Patent No. 5,815,805).

Regarding claim 5, in further view of claims 1 and 13, Thompson disclose a detachable module 100 comprising a transceiver 104, but Thompson does not further disclose "wherein the detachable module comprises one of a power amplifier, a transmission signal filter and an isolator" and "wherein the transmission function unit includes an amplifier, a transmission signal filter and an isolator"; however, in a transmitting section of a portable telephone set, the transmitting section is known to include a power amplifier, a transmission signal filter and an isolator. In fact, Crnkovic teaches a same technique to include a power amplifier 113, a transmission signal filter 112 and an isolator 115 in transmitter section 101 (Fig. 1, and col. 7/line 63 to col. 8/line 14 as attenuator 115 is a TDK isolator). Therefore, it would have been obvious to modify Thompson's transceiver circuit with Crnkovic's detailed components of a transmitter section comprising one of a power amplifier, a transmission signal filter and an isolator within the detachable module as

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means for matching or replacing appropriate transmitting section parts accordingly due to power adjustments to different transmission systems as suggested by Crnkovic with the benefits of comprising one of a transmit filter, a power amplifier and an isolator or attenuator (col. 1/lines 25-50, col. 6/line 66 to col. 7/line 35 , and col. 7/line 63 to col. 8/line 14).

6. Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (U.S. Patent No. 5,465,401) in view of Wing as in claims 1 and 8 above, and in view of Lehtinen et al. (US Patent 5,852,603).

As for claims 17 and 19, Thompson and Wing does not address to include “a wide-band transmitting circuit” within the portable telephone set; however, Lehtinen suggests to include a wide-band synthesizer 17 within a wide-band transmitting/receiving circuit (Fig. 2) for handling the switching between different modes within the transceiver (see col. 2/line 24 to col. 3/line 18). Therefore, it would have been obvious to modify Thompson’s transceiver circuit with a wide-band transmitting/receiving circuit as suggested by Lehtinen for handling different modes within the transceiver such as FDD and TDD modes as taught by Lehtinen.

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Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306, (for Technology Center 2600 only)

*Hand-delivered responses should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (703) 308-5860. The examiner can normally be reached on Monday-Friday from 9:00 AM to 6:00 PM, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

Tony T. Nguyen
Art Unit 2685
January 7, 2004

